

Appl. No. 10/707,505
Response Dated June 7, 2006
Reply to Office Action Dated February 7, 2006

Amendments to the Claims

1. (currently amended) A sidewall coring tool, comprising:
a tool body;
a hollow coring shaft extendable from the tool body;
a formation cutter disposed at a distal end of the hollow coring shaft; and
an elastic retention member segmented into a plurality of petals and disposed in the hollow coring shaft, wherein the petals are oriented relative to each other to minimize an aperture near a center of the retention member.
2. (original) The sidewall coring tool of claim 1, further comprising an internal sleeve disposed inside the hollow coring shaft, and wherein the retention member is connected to the internal sleeve.
3. (original) The sidewall coring tool of claim 2, wherein the retention member is disposed proximate a distal end of the internal sleeve.
4. (original) The sidewall coring tool of claim 2, wherein the internal sleeve comprises a non-rotating sleeve.
5. (original) The sidewall coring tool of claim 2, wherein the internal sleeve comprises a radial notch such that the petals of the retention member can be positioned radially outward into the notch.
6. (original) The sidewall coring tool of claim 5, wherein the retention member has a petal circumference that is substantially the same as an inner diameter of the internal sleeve.
7. (original) The sidewall coring tool of claim 2, further comprising a piston disposed inside the internal sleeve and axially moveable with respect to the internal sleeve.

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8. (original) The sidewall coring tool of claim 2, further comprising a check valve disposed in the internal sleeve.

9. (original) The sidewall coring tool of claim 8, wherein the check valve is disposed in a proximal end of the internal sleeve.

10. (original) The sidewall coring tool of claim 9, wherein the check valve enables a fluid to flow out of the internal sleeve.

11. (currently amended) The sidewall coring tool of claim 1, wherein an inner diameter of ~~the~~ an internal sleeve is substantially the same as an inner diameter of the formation cutter.

12. (currently amended) The sidewall coring tool of claim 1, wherein an inner diameter of ~~the~~ an internal sleeve is larger than an inner diameter of the formation cutter.

13. (original) The sidewall coring tool of claim 1, wherein the internal sleeve comprises a bladder configured to apply radial pressure to a core sample when the bladder is selectively filled with a fluid.

14. (original) The sidewall coring tool of claim 1, wherein the plurality of petals comprises 3 petals.

15. (original) The sidewall coring tool of claim 1, wherein the plurality of petals overlap.

16. (original) The sidewall coring tool of claim 1, wherein the plurality of petals are separated by gaps.

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17. (original) The sidewall coring tool of claim 1, wherein the retention member comprises perforations.

18. (original) The sidewall coring tool of claim 17, wherein the perforations are circumferential perforations disposed outside a petal circumference.

19. (original) The sidewall coring tool of claim 17, wherein the perforations are radial perforations disposed at least partially inside a petal circumference.

20. (original) The sidewall coring tool of claim 1, wherein the plurality of petals are adjacent.

21. (original) The sidewall coring tool of claim 1, wherein the retention member is constructed of rubber.

22. (original) The sidewall coring tool of claim 1, wherein the retention member is rounded and extrudes towards a distal end of hollow coring shaft.

23. (original) The sidewall coring tool of claim 1, wherein the retention member is rounded and extrudes towards a proximal end of the hollow coring shaft.

24. (currently amended) A method for taking a core sample, comprising:
extending a coring bit into a formation, the coring bit having an elastic retention member segmented into a plurality of petals, wherein the petals are oriented relative to each other to minimize an aperture near a center of the retention member;

receiving the core sample in the coring bit; and
retaining the core sample in the coring bit with the retention member while withdrawing the coring bit from the formation.

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25. (original) The method of claim 24, further comprising selectively filling a bladder with a fluid to apply a radial pressure to the core sample.

26. (original) The method of claim 24, wherein the retention member is connected to an internal sleeve disposed in the coring bit and the core sample is received in the internal sleeve.

27-34. (canceled)

35. (new) A sidewall coring tool, comprising:
a tool body;
a hollow coring shaft extendable from the tool body;
a formation cutter disposed at a distal end of the hollow coring shaft; and
an elastic retention member segmented into a plurality of petals and disposed in the hollow coring shaft, wherein the plurality of petals form a substantially contiguous surface.

36. (new) The sidewall coring tool of claim 35, wherein each of the petals includes at least one edge that at least partially defines the petal.

37. (new) The sidewall coring tool of claim 36, wherein the at least one edge of a first of the plurality of petals abuts the at least one edge of a second of the plurality of petals.

38. (new) The sidewall coring tool of claim 35, further comprising an internal sleeve disposed inside the hollow coring shaft, and wherein the retention member is connected to the internal sleeve.

39. (new) The sidewall coring tool of claim 38, wherein the retention member is disposed proximate a distal end of the internal sleeve.

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40. (new) The sidewall coring tool of claim 38, wherein the internal sleeve comprises a non-rotating sleeve.

41. (new) The sidewall coring tool of claim 38, wherein the internal sleeve comprises a radial notch such that the petals of the retention member can be positioned radially outward into the notch.